

2008 SEEDS Leadership Meeting Final Report
February 21-24, 2008
Duke University

From February 21-24, 2008 thirty six SEEDS students and alumni leaders gathered at Duke University from all aspects of the SEEDS program, including representation from 17 Chapters. ESA governing board members, Duke University ecologists, SEEDS staff and local Chapter advisors also contributed to the meeting through leading workshops, participating in a career panel, or providing feedback on student ideas (Appendix A).

The meeting was preceded by a Fellowship Orientation for a very excited group of SEEDS fellows and mentors (two mentors in person, and four by phone). ESA Vice President of Science Rob Jackson led a discussion on mentoring. Mentor Beth Middleton cautioned against fatal flaws in getting published, including a lack of logical flow in the manuscript and advised writers to stay in focus from the opening sentence. Helda Morales, our new mentor from Mexico, stressed the human dimension in ecology as she shared how her research on pest management issues in farming led to incorporating local farmers' knowledge, policy issues and a multidisciplinary team. The Fellowship Orientation agenda can be found in Appendix B.

The start of the Leadership meeting kicked off with a welcome dinner and reception with words of greeting from ESA President Norm Christensen and SEEDS alumni Joel Abraham. The energy was high in anticipation of the next two days, in which a variety of opportunities allowed for the leadership torch to be passed and shared among SEEDS participants. Christina Wong, Jorge Ramos, and Jeramie Strickland gave a joint workshop on the subject of choosing and applying for Master's programs. Joel Abraham and Zakiya Leggett continued with a workshop on the challenges associated with pursuing a Ph.D. degree. In preparation for the breakout group sessions in which students discussed future plans and opportunities, Norm Christensen and ESA Director of Education and Diversity Programs, Teresa Mourad led a workshop on Leadership and Visioning. See Appendix C for the Leadership Meeting agenda.

Participants were introduced to Duke University's Nicholas School for the Environment and their graduate programs, enjoyed a tour of the campus, and explored Duke Forest with Norm Christensen. The group of inspired SEEDS students also exchanged ideas with Duke ecologists Ariana Sutton-Grier, Chantal Reid, Jim Clark, and Zakyia Leggett as a Nicholas School alumna, during a career panel discussion. ESA Vice President of Education and Human Resources, Meg Lowman treated students to a motivating workshop on "Making your Hopes into a Reality".

Student breakout group discussions were a meeting highlight. Four groups were formed prior to the meeting and group leaders stimulated discussion among members via email before participants arrived in Durham (see Appendix D for group participants lists). During the meeting, the four breakout group discussions that followed were aglow with rich ideas. This opportunity stimulated discussions amongst the group which displayed the participants' ability to think critically and broadly as leaders.

We were pleased to have SEEDS Chapter Advisors Dr. Joe Fail, Johnson C. Smith University; Dr. Sashi Sabaratnam, Livingstone College; and Dr. Godfrey Uzochukwu, North Carolina A&T University who shared their response to the group reports.

Breakout group summaries follow.

Group 1: Chapter Collaboration, led by Charlee Glenn

Question: How can the 43 Chapters in the SEEDS Chapter network build collaboration to become more cohesive despite the distance between Chapters? The group talked about building Chapters in three broad areas: recruitment, collaboration, and funding.

- *Recruitment*
 - Incentives for drawing in new members
 - Trips, professional speakers, FOOD, fellowships, national affiliation, extra credit (from professors), door prizes (book vouchers) at meetings.
 - Appeal to non-traditional students
 - Multicultural events and family friendly events
 - Increase awareness of maintenance and special project grants
- *Chapter Collaboration*
 - To increase chapter unity and communication
 - Experience journals: share ideas, tips, challenges faced and solutions implemented. Also include contact info for each chapter
 - Annual chapter conferences: Regional meetings that would help foster friendships, networks, and lasting bonds with other ecologists and Chapters
 - hosting schools could be rotated year to year
 - Long term SEEDS projects (LTSP): Ongoing comparative projects, much like LTERs that will be a collective effort by the Chapters in their respective regions.
 - Suggested was a study on invasive species in differing biomes
 - LTSP could go on to provide students with valuable research experience, that might be counted as school credit
 - LTSP could be presented at SEEDS and ESA Meetings
- *Funding*
 - Chapters need to work with SEEDS staff to ensure ways to easily access funding, such as maintenance grants and special project grants. Sometimes, the funds can be difficult to access as they are a small amount in a large university system.

Group 2: Education and Outreach, led by Lauren McGee

Question: How can SEEDS ensure that Education and Outreach is a permanent part of ESA meetings? The SEEDS Education and Outreach Initiative (SEOI) committee was formed in 2007 with the SEEDS-coordinated field trip in San Jose to continue strengthening connections between local environmental groups, schools, and communities at future ESA Annual Meeting sites. This year, SEOI is planning an “Ecological Outreach Opportunity (EOO) – “BioBlitz” at the proposed Milwaukee

Central Park riparian corridor”. The SEOI committee has secured funding from Project Learning Tree to support this project, and is committed to establishing a long-term impact in Milwaukee through high school SEEDS Chapters. In discussing how to institute education and outreach during ESA meetings, the group talked about developing a model that could be carried from year to year to ease the time of implementing such an event. Such steps include:

- contact local teachers (interested in aspects in environmental and science education) – have them identify exemplary students that would be enthusiastic about attending the fieldtrip
- find a local scientist to serve as a mentor to high school SEEDS chapters once the fieldtrip is complete – so that they can continue doing service learning projects
- try to include at least one tribal school in outreach efforts
- send out a “video letter” for students interested in fieldtrip to introduce them to the many facets of ecology
- contact local school boards and present info about fieldtrips – get recommendations of schools that would be interested in the trip
- film components of the 2008 fieldtrip (evals, fieldtrip activities, etc.) to use as an advertising mechanism for future fieldtrips
- advertise about fieldtrip in local community newspapers and through ESA resources (blog, bulletin, SEEDS newsletter, etc.)

Group 3: Alumni Committee, led by Raynelle Rino

Question: What can the SEEDS alumni network do to more formally support one another and promote SEEDS to incoming students? Now that the SEEDS program has been in existence for a long time, the alumni network of participants is growing. The SEEDS alumni network remains strong although there is little direct financial support for alumni from the SEEDS program. The networks has been invaluable to some students as they make their way through graduate school or employment, and face difficult challenges of being underrepresented in a community where they do not feel valued. SEEDS alumni are taking it upon themselves to connect and support one another through these challenges. The alumni committee wants to be able to reach more students that may need to reconnect with SEEDS support. The committee also wants to get involved in program promotion to incoming students. Here’s how:

- *Networking*
 - Updating database with SEEDS alumni
 - “Alumni Corner” on the SEEDS webpage
 - List of all members
 - Interactive map with location and info of each alumnus
 - Discussion board to discuss issues such as grad school challenges and successes, parenting challenges, and discriminatory/racial
 - Link from homepage to Facebook group
 - Link to some writing samples from alumni to help other alumni (resumes, CVs, proposals, personal statements, etc)
- *Leadership support*
 - Informal meetings at different conferences such as ESA, AISES, SACNAS, etc., and also by manning booths at these conferences

- Voluntarily review of fieldtrip applications and help in the fieldtrip planning as needed.
- The leadership support can be offered in the form of SEEDS workshops in different conferences or regional SEEDS chapters – we would require financial support for this.
- Alumni members within or outside of the committee could also get called upon to carry out regional SEEDS chapter visits
- *Promoting*
 - Small fund be set in place to purchase promotional merchandise like T-shirts. T-shirts can be used to identify SEEDS alumni in national conferences, meetings, and in SEEDS chapter site visits.
 - Other merchandise that was suggested includes banners, buttons, pens, etc.

Group 4: Anthropogenic Biomes led by Christina Wong

Question: What are the frontiers of ecology research that SEEDS students need to be aware of, participate in, and contribute their own novel ideas? This group's topic was inspired by a January 2008 article from *Frontiers in Ecology and the Environment*. This is what they had to say:

Traditionally, the concept of biomes has been centered on classifying ecosystems at a large scale based primarily on climate and dominant vegetation types but cumulative effects of thousands of years of human land use are now evident at higher spatial scales (i.e. biomes). Human land use is driven by various socio-political, economic, and cultural factors but can be classified in terms of their characteristic ecological interactions such as nutrient use and inputs, energy cycling, and physical disturbance regimes that both influence and respond to factors that have been traditionally used to define biomes. This behooves us to consider large-scale classifications of global landscapes that integrate human interactions. In spite of some disagreement amongst ecologists over the acceptance of terms that more accurately describe the planet's biomes, such as *anthropogenic biomes* or *anthromes*, there is a need to illustrate such perspectives to the general public. Such approaches to ecological classification do not imply a new field but a broadened perspective of what an ecosystem is.

The development of new technologies has enabled ecologists to challenge traditional views that imply a dualism between humans and nature. No longer should we project nature as existing in a separate realm, only visited to escape the stresses of our urban landscapes. This approach to understanding nature places us in the outside looking in, a common misconception that is, unfortunately, prevalent amongst the general public and in conventional ecological research. Our everyday actions are embedded within large human dominated landscape matrices interspersed with diminishing natural patches. As the degree of human influence on the environment increases on a global scale, the need for ecologists to recognize anthropogenic interactions and integrate them into our perspective of ecosystem structure and function also increases. This goes beyond the bounds of our research. We need to integrate this broadened perspective into the ways that we teach and portray ecology both to younger generations in K-12 education and to the general public as a whole. As a community of scientists, we must be concerned with

reaching out and disseminating our knowledge not only to foster a more informed and responsible general public, but also because doing so will strengthen ecology as a science.

Meeting Evaluations

In large part, participants evaluated the meeting favorably (Appendix E). Students were asked basic questions such as, “what led to your participation in SEEDS?”. On a scale of 1-7, with 7 as the highest rating, students on average said that the desire to collaborate with like minded people (6.23) is what led them to participate in SEEDS. Leading to students *continued* participation in SEEDS, students rated their desire to contribute to others after gaining from SEEDS (7.00), desire to collaborate with like minded people (6.96), and desire to contribute to the ecology profession (6.77) as the highest factors.

Students were asked what the leadership meeting has done for them. Again, on a 1-7 scale, students said the meeting demonstrated they are welcome in ecology (6.89), encouraged them to lead within ecology (6.89), created a desire to remain an ESA member into the future (6.88), and created a desire to promote ecology to others (6.88) as highest. Lowest were, created a desire to do different ecology research than they planned on doing (5.58), and encouraged them for run for an ESA governing board office (4.80).

Students were asked where they would like to see themselves in an ecology career. Most students (14) indicated they wanted to have a PhD, but not work at a university. Next highest was 6 students indicating they would work in ecology with a Master’s degree. Five students wanted a PhD and to work at a university. No one said they did not want an ecology career, but 2 students did not know what career they would pursue.

Students indicated they experienced growth in several areas as a result of participating in the leadership meeting. Most students gained an understanding of what ESA is and does, followed by an understanding of what ecology leaders do and an understanding of ecology in general. There was the least growth in students gaining an interest in ecology, presumably because their ecology interest was high coming into the meeting.

Finally, students were asked how important and how satisfied they were with all aspects of the meeting. The levels of importance and satisfaction were about the same, with no major differences standing out.

Common themes emerged in the written comments about the meeting. Students wanted to see more down time, more time with each other, more time exploring the Duke forest (research and ecosystem), ground rules set so every student has an opportunity to be heard and no one is interrupted.

Appendix A – SEEDS 2008 Leadership/Fellowship meeting participants

Students/Alumni

Joel Abraham	UC Berkeley
Alexa Azure	United Tribes Technical College
Noemi Baquera	New Mexico State University
Becky Begay	U of Kansas/Haskell Indian Nations
Annette Cardona	Texas A&M Corpus Christi
Antonio Cordera	Oregon State University, ESA Intern
Colleen Cooley	Northern Arizona University
Kyle Dobson	North Carolina A&T
Serge Farinas	Clayton State
Kellen Gillespie	Chicago State University
Charlee Glenn	Clayton State
Jerriel Hall	Hampton University
Sheena Hillstrom	Washington State University
Edith Jaurrieta	UT El Paso
Chrazy Jones	New College of Florida
Zakiya Leggett	Weyerhaeuser
Adriana Leiva	Texas A&M Corpus Christi
Micki Lindeman	United Tribes Technical College
Lauren McGee	Ohio State University
Kenya McNear	North Carolina A&T
Brittany Miles	Johnson C. Smith University
Lorna Moreno	UPR Rio Piedras
Cynthia Oporum	Livingstone College
Perez, Ana Elisa	UPR Rio Piedras
Ramos, Jorge	University of Washington
Reed, Lewis	Southern Illinois U, Carbondale
Renteria, Sara	UT El Paso
Reynolds, Kristen	Johnson C. Smith University
Rino, Raynelle	San Francisco State U
Rosado Casanova, Belen	UPR Bayamon
Sanfiorenzo, Colibri	UPR Rio Piedras
Siddique, Abdul Hameed	Rust College
Stahley, Anne	Clayton State
Strickland, Jeramie	Iowa State University
Vickery, Ku`ulei	UH Manoa
Wong, Christina	San Francisco

Affiliation

Mentors

Abraham, Joel	UC Berkeley
Leggett, Zakiya	Weyerhaeuser
Norm Christensen	Duke University
Meg Lowman	New College of Florida
Middleton, Beth	National Wetland Research Center
Morales, Helda	El Colegio de la Frontera Sur
Rob Jackson	Duke University

Appendix A continued

Staff

Armstrong, Melissa	ESA
Vinson, Erin	ESA
Mourad, Teresa	ESA
Cordero, Antonio	ESA

Panelists

Ariana Sutton-Grier	Duke University
Chantel Reid	Duke University
Jim Clark	Duke University
Leggett, Zakiya	Weyerhaeuser

SEEDS Chapter Advisors

Joe Fail	Johnson C. Smith University
Sashi Sabaratnam	Livingstone College
Godfrey Uzochukwu	North Carolina A&T

Appendix B
SEEDS Fellowship Orientation
Meeting Agenda

Wednesday, Feb. 20

Participants arrive. Dinner in town (optional).

Thursday, Feb. 21 - Rubenstein Hall, Room 242

9:00 – 9:20	Welcome, review of itinerary, group introductions	Melissa Armstrong, ESA
9:20 – 10:00	Current SEEDS fellows practice talks	Annette Cardona, Sheena Hillstrom, Jarrod Blue (virtually)
10:00 – 10:40	Rob Jackson - Advice on mentoring	ESA Vice President of Science
11:00 - noon	Workshop 1. 10 questions to ask when you are selecting a research topic 2. writer's stumbling blocks from an editor's perspective	Beth Middleton, National Wetlands Research Center
12:00 – 1:00	Lunch	
1:00 – 1:45	Review of fellowship requirements, questions, advice from current fellows, mentors not attending call in.	Melissa Armstrong and Erin Vinson, ESA
1:45 – 2:30	Workshop – Communicating your work to scientific and public audiences.	Emily Omana, Grand Canyon Wildlands Council
2:30 – 2:45	Break	
2:45 – 3:30	Workshop - Adding the human dimension to our ecological research	Helda Morales, El Colegio de la Frontera Sur
3:30 – 4:00	Debrief, complete evaluations	
6:00 – 8:00	Welcome dinner at Quality Inn with the rest of the Leadership group	Norm Christensen, ESA President; Joel Abraham, UC Berkeley

Friday, Feb. 22

Students stay until Sunday for the SEEDS leadership meeting, mentors may depart.

2008 – 2009 Fellowship Group:

Student	Mentor
Colleen Cooley, Northern Arizona University	Larry Stevens and Emily Omana, Grand Canyon Wildlands Council
Serge Farinas, Clayton State University	Beth Middleton, USGS, National Wetlands Research Center
Adriana Leiva, Texas A&M Corpus Christi	Lisa Ballance, NOAA, Southwest Fisheries Science Center
Brittany Miles, Johnson C. Smith University	Sandra Clinton and Amy Ringwood, University of North Carolina, Charlotte
Ana Elisa Perez Quintero, University of Puerto Rico, Rio Piedras	Helda Morales, El Colegio de la Frontera Sur, San Cristóbal de las Casas, Chiapas, MX
Sara Renteria, University of Texas, El Paso	Jay Jones and Amanda Rinehart, University of Alaska, Fairbanks

Appendix C
SEEDS Leadership Meeting
Meeting Agenda

Theme: Voices of Hope in a Rapidly Changing World
 Host: ESA President Norm Christensen

Thursday, Feb. 21 - Rubenstein Hall, Room 242

Welcome dinner 6:00 pm at Quality Inn - Greetings from Norm Christensen and Joel Abraham

Friday, Feb. 22 – Sanford Institute of Public Policy, Room 04

8:00 – 8:45	Continental breakfast at Quality Inn	
8:45	Bus departs for Duke University	
9:00 – 9:20	Welcome, review of itinerary, group introductions	Melissa Armstrong, ESA
9:20 – 9:30	Welcome from the Nicholas School	Jen Nelson, Nicholas School, Duke University
9:30 – 9:45	Nicholas School Master’s program	Cindy Peters and Joe Scarfo, Enrollment Services
9:50 – 10:35	So you are thinking about pursuing ecology in graduate school? The things you should know about a Master’s program.	Christina Wong, applying; Jorge Ramos, 1 st year University of Washington; Jeramie Strickland, 2 nd year Iowa State University
10:35 – 10:45	Break	
10:45 – 12:00	Workshop – Leadership and Visioning in Ecology	Norm Christensen, President ESA and Teresa Mourad, ESA Education Director
12:00 – 1:30	Lunchtime panel discussion: how did you become an ecologist and what does the world need from its ecology leaders?	Ariana Sutton-Grier, Chantal Reid, Emily Bernhardt, Jim Clark, Zakiya Leggett
1:30 – 2:00	Tour of Duke campus	Melissa Stephens
2:00 – 2:45	Workshop – Deciding to pursue a PhD, surviving it, and then what?	Zakiya Leggett, Weyerhaeuser and Joel Abraham, UC Berkeley
2:50 – 3:10	Breakout group introductions (1) SEEDS Chapter Collaboration (2) Education and outreach efforts at ESA meetings (3) SEEDS Alumni Committee (4) Anthropogenic biomes	Charlee Glen Lauren McGee Raynelle Rino Christina Wong
3:10 – 5:00	Breakout groups meet	
5:00 – 6:00	Break at the Quality Inn	
6:00 – 7:30	Dinner out, bus departs at 6:00	

Appendix C continued

Saturday, Feb. 23 - Rubenstein Hall, Room 153

8:00 – 8:45	Continental breakfast at Quality Inn	
8:45	Bus departs for Duke University	
9:00 – 9:45	SEEDS Fellowship Presentations of Research	Jarrold Blue, Sheena Hillstrom, Annette Cardona
9:45 – 10:00	Break	
10:00 – 11:00	Breakout groups meet, organize an outline on next steps	
11:00 – 12:00	Breakout groups present their ideas to the whole group, get feedback.	Hearing board: SEEDS Chapter Advisors Dr. Joe Fail, Johnson C. Smith; Dr. Sashi, Livingstone College; Dr. Uzo, NCA&T
12:00 – 1:00	Lunchtime Workshop – how to make your great ideas into a reality.	Meg Lowman – Vice President of ESA, Education and Human Resources Committee (EHRC)
1:15 – 3:30	Tour of Duke Forest	Norm Christensen
3:30 – 5:30	Break at Quality Inn	
5:30 – 6:00	Meeting debrief and evaluations	
6:00 – 7:30	Dinner at hotel	
7:30 – 9:00	Groups work on writing for joint publication	

Sunday, Feb. 24

Participants depart

Appendix D – Breakout group contributors

Group 1: SEEDS Chapter Collaboration led by Charlee Glenn
Cooley, Colleen
Glenn, Charlee
Hall, Jerriel
Lindeman, Micki
Sanfiorenzo, Colibri
Siddique, Abdul Hameed
Stahley, Anne
Gillespie, Kellen
Group 2: Education and outreach efforts at ESA meetings led by Lauren McGee
Azure, Alexa
Begay, Becky
Cardona, Annette
Jones, Chrazy
McGee, Lauren
Miles, Brittany
Perez, Ana Elisa
Renteria, Sara
Reynolds, Kristen
Oporum, Cynthia
Group 3: SEEDS Alumni Committee led by Raynelle Rino
Baquera, Noemi
Jaurrieta, Edith
Hillstrom, Sheena
Leggett, Zakiya
McNear, Kenya
Ramos, Jorge
Rino, Raynelle
Strickland, Jeramie
Group 4: Anthropogenic biomes/ecology visions led by Christina Wong
Abraham, Joel
Dobson, Kyle
Farinas, Serge
Moreno, Lorna
Reed, Lewis
Rosado Casanova, Belen
Vickery, Ku`ulei
Wong, Christina

Appendix E – Meeting Evaluation

What led to your participation in SEEDS?	Mean (7 highest, 1 lowest)
Desire to collaborate with like minded students	6.23
Professor	5.13
Interaction with an ESA member	5.35
Recommendation from other students	4.70
Minority Serving Conference	4.25
Chapter Involvement	4.47
Email contact	4.00
Web Search	3.71
What leads to your continued participation in SEEDS?	Mean (7 highest, 1 lowest)
I have gained from SEEDS and want to contribute so others can also gain	7.00
A desire to collaborate with like minded people	6.96
A desire to contribute to the ecology profession	6.77
A desire to communicate ecology to the public (education and outreach)	6.69
SEEDS has become like family	6.80
SEEDS is where I feel most welcome in the ecology profession	6.67
A desire to take ecology into other aspects of my life, such as family or another profession	6.57
To what degree has the SEEDS leadership meeting:	
Demonstrated that you are welcome in the field of ecology	6.89
Encouraged you to lead within ecology	6.89
Created a desire to remain an ESA member into the future	6.88
Created a desire to promote ecology to others	6.88
Provided you with support from other students	6.77
Encouraged you to lead in other aspects of your life - your community, another profession or organization	6.73
Created a desire to do more ecology research	6.73
Provided you with support from ESA leadership	6.43
Created a desire to do different ecology research that you are doing or planned doing	5.58
Encouraged you run for an office of the ESA governing board in the future	4.80

Appendix E continued

Where do you see yourself in relation to a career in ecology?

I do not want an ecology career	0
I want to use ecology in my career, but will have a career in a different field	2
Ecology career with Bachelors degree	1
Ecology career with Masters degree	6
A PhD ecologist at a university	5
A PhD ecologist not at a university	14
I do not know	2

Thinking about before and after your participation in the SEEDS leadership meeting, what was your:

	Before	After	Growth
Interest in Ecology	5.77	6.83	1.06
Involvement with the ecological community	4.92	6.43	1.50
Understanding of ecology	4.28	6.48	2.20
Understanding of what Ecology leaders can do	4.28	6.57	2.30
Understanding of what ESA is/does	4.04	6.57	2.54

How important and how satisfied were you with the following aspects of the SEEDS leadership meeting?

	Importance	Satisfaction	Difference
Career panel discussion	6.46	6.37	-0.09
Down time	5.76	5.52	-0.24
Involvement of ESA Leaders	6.69	6.82	0.13
Leadership and visioning workshop (Chistensen, Mourad)	6.55	6.61	0.06
Making hopes a reality workshop (Lowman)	6.45	6.59	0.14
Master's degree workshop (Wong, Ramos, Strickland)	6.45	6.79	0.34
Organization of the meeting	6.54	6.61	0.07
PhD workshop (Leggett, Abraham)	6.34	6.82	0.48
Pre trip communication	6.17	6.18	0.01
Progress the group made toward a joint publication	6.38	6.21	-0.17
Tour of Duke Forest	5.66	5.38	-0.28
Work with breakout group before the meeting	6.03	5.79	-0.24
Work with breakout group during the meeting	6.38	5.97	-0.41